

STANDARD OPERATING PRACTICE OTIE008F

Monitoring Well Sampling



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Attachments

Attachment 1 Groundwater Sampling Equipment and Supplies Checklist

QC Review Signatures		
Name/Role	Signature	Date
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1.0 SCOPE AND APPLICATION

This standard operating procedure (SOP) addresses the supplies, equipment, and procedures to be used to purge wells and collect groundwater samples for chemical and natural attenuation parameters. A consistently implemented groundwater sampling procedure will help ensure data comparability between different sampling events. However, in all cases, the methods, equipment, and procedures in this SOP should be tailored to site-specific conditions and project data quality objectives.

The procedures in this SOP apply to permanent monitoring wells but may be followed for sampling of temporary wells, extraction wells, and other types of wells with some modifications. This SOP addresses procedures for collection of aqueous samples only. Procedures for collection of light or dense non-aqueous phase liquids (LNAPL or DNAPL) samples or collection of aqueous samples when LNAPL or DNAPL are present in a well are not covered.

2.0 OBJECTIVE

The objective of groundwater sampling is to produce representative, verifiable, and legally defensible groundwater quality data. To ensure that this objective is achieved, sampling protocols must be strictly followed and sample collection and handling must be properly documented in field logbooks, groundwater sampling logs, chain-of-custody forms, and project files.

It is common practice to purge monitoring wells before collecting samples. Purging is performed to remove stagnant water from the well and assure that the sample is representative of in-situ groundwater conditions. However, purging techniques can reduce the representativeness of groundwater by affecting well hydraulics and causing chemical changes in the well and aquifer. Therefore, this SOP provides general guidance on sampling techniques, but the user is expected to perform the necessary pre-sampling planning and equipment selection, and to implement methods that are appropriate for each site.

3.0 SAMPLING PREPARATIONS

3.1 *Document and Information Review*

Prior to obtaining equipment and supplies, review the site-specific plans and historical information. Field personnel or at least the Field Team Leader(s) should review:

- Site-specific Safety and Health Plan (SSHP), Material Safety Data Sheets (MSDS), and other safety related information. Consider what personal protective equipment (PPE) is necessary and what decontamination procedures must be followed.